

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A dermatological formulation comprising a physiologically acceptable carrier and an effective amount of one or more plant extracts having extracellular protease inhibiting activity, said plant extract derived from any one of the plants listed in Tables 1, 2, 3, 4 and 5 by solvent extraction, said extracellular protease selected from the group of: matrix metalloprotease-1 (MMP-1), matrix metalloprotease-2 (MMP-2), matrix metalloprotease-3 (MMP-3), matrix metalloprotease-9 (MMP-9) and human leukocyte elastase (HLE), wherein said extract affects one or more cellular activities in skin cells.
2. The dermatological formulation according to claim 1, wherein said one or more cellular activities in skin cells are selected from the group of: attenuating the breakdown of collagen, fibronectin, fibrillin and/or elastin; attenuating endothelial cell migration; increasing collagen production; attenuating UV-induced extracellular protease activity and attenuating tractional forces generated by fibroblasts.
3. The dermatological formulation according to claim 1 or 2, wherein said solvent is an aqueous solvent, an alcoholic solvent, or a combination thereof.
4. A plant extract having extracellular protease inhibiting activity, said plant extract derived by solvent extraction from a plant selected from the group of: *Aconitum napellus*, *Acorus calamus*, *Alchemilla mollis*, *Allium cepa*, *Allium sativum*, *Allium tuberosum*, *Ambrosia artemisiifolia*, *Anethum graveolens*, *Anthemis tinctoria*, *Aronia melanocarpa* (Michx.) Ell., *Arctostaphylos uva-ursi*, *Aronia x prunifolia*, *Artemisia dracunculus*, *Avena sativa*, *Beta vulgaris*, *Beta vulgaris L. subsp. Vulgaris*, *Borago officinalis*, *Brassica napus*, *Brassica oleracea*, *Brassica oleracea L. var. italica* Plenck, *Brassica rapa*, *Bromus inermis*, *Capsicum annuum L. var. annuum*, *Cerastium tomentosum*, *Chaerophyllum bulbosum*, *Chenopodium quinoa*, *Chenopodium quinoa subsp. Quinoa*, *Chenopodium quinoa Willd.*, *Chichorium endivia*, *Chichorium endivia subsp. Endivia*, *Cirsium arvense*, *Citrullus lanatus*, *Cornus*

canadensis, *Cornus sericea*, *Cynara cardunculus* subsp. *Cardunculus*, *Daucus carota*, *Daucus carota* subsp. *carota* L., *Dolichos lablab*, *Euphorbia amygdaloides*, *Fagopyrum tataricum*, *Foeniculum vulgare*, *Frangula alnus*, *Galinsoga quadriradiata*, *Gentiana lutea*, *Geranium sanguineum*, *Geranium x cantabrigiense*, *Glycyrrhiza glabra*, *Hamamelis virginiana*, *Helianthus strumosus*, *Heliotropium arborescens*, *Hordeum vulgare* subsp. *Vulgare*, *Hypomyces lactifluorum*, *Juniperus communis* L., *Lentinus edodes*, *Lotus corniculatus*, *Manihot esculenta*, *Matricaria recutita*, *Melilotus albus*, *Melilotus alba* Medik., *Melissa officinalis*, *Mentha x piperita*, *Oenothera biennis*, *Pastinaca sativa* L., *Petroselinum crispum*, *Phaseolus vulgaris*, *Physalis philadelphica*, *Phytolacca decandra*, *Phytolacca decandra* syn. *P. americana*, *Pimpinella anisum*, *Pisum sativum*, *Potentilla anserina* L., *Potentilla fruticosa*, *Poterium sanguisorba*, *Pyrus communis*, *Raphanus raphanistrum*, *Rheum x hybridum*, *Rhus typhina* L., *Ribes nigrum* L., *Ribes sylvestre*, *Rodgersia* spp., *Rosmarinus officinalis*, *Rubus occidentalis*, *Rubus thibetanus*, *Rumex crispus*, *Rumex scutatus*, *Ruta graveolens*, *Salvia officinalis*, *Sambucus canadensis* L., *Setaria italica*, *Solanum melongena* L., *Sorghum dochna bicolor* gr. *technicum*, *Stellaria media*, *Tanacetum cinerariifolium*, *Taraxacum officinale*, *Teucrium chamaedrys*, *Thymus fragrantissimus*, *Thymus x citriodorus*, *Trifolium incarnatum*, *Triticosecale* spp., *Tropaeolum majus* L., *Tsuga canadensis*, *Tsuga diversifolia*, *Vaccinium angustifolium*, *Vaccinium angustifolium* Ait., *Vitia* sp., *x Triticosecale* spp., *Zea mays* L. and *Zingiber officinale*, and said extracellular protease selected from the group of: matrix metalloprotease-1 (MMP-1), matrix metalloprotease-2 (MMP-2), matrix metalloprotease-3 (MMP-3), matrix metalloprotease-9 (MMP-9) and human leukocyte elastase (HLE).

5. The plant extract according to claim 3, wherein said plant is selected from the group of: *Beta vulgaris* L., *Brassica oleracea* L., *Capsicum annuum* L., *Chenopodium quinoa*, *Daucus carota* L., *Geranium x cantabrigiense*, *Juniperus communis* L., *Melilotus alba*, *Pastinaca sativa* L., *Potentilla anserina* L., *Rhus typhina* L., *Solanum melongena* L., *Tropaeolum majus* L., *Vaccinium angustifolium*, *x Triticosecale* spp. and *Zea mays* L.

6. The plant extract according to claim 4 or 5, wherein said solvent extraction employs an alcohol, water, an aqueous buffer, or a combination thereof as solvent.
7. The plant extract according to claim 6, wherein said alcohol is ethanol or a glycol.
8. The plant extract according to any one of claims 4, 5, 6 or 7, wherein said plant is subjected to one or more stress prior to said solvent extraction.
9. Use of the plant extract according to any one of claims 4, 5, 6, 7 or 8 in the preparation of a dermatological formulation.
10. Use of the dermatological formulation according to any one of claims 1, 2 or 3 for the routine care of the skin, hair and/or nails.
11. Use of the dermatological formulation according to any one of claims 1, 2 or 3 to improve the health and/or appearance of the skin, hair and/or nails.
12. Use of the dermatological formulation according to any one of claims 1, 2 or 3 in the treatment or prevention of a dermatological condition.
13. Use of the dermatological formulation according to any one of claims 1, 2 or 3 to attenuate or prevent skin ageing.
14. Use of the plant extract according to any one of claims 4, 5, 6, 7 or 8 for the routine care of the skin, hair and/or nails.
15. Use of the plant extract according to any one of claims 4, 5, 6, 7 or 8 to improve the health and/or appearance of the skin, hair and/or nails.
16. Use of the plant extract according to any one of claims 4, 5, 6, 7 or 8 in the treatment or prevention of a dermatological condition.
17. Use of the plant extract according to any one of claims 4, 5, 6, 7 or 8 to attenuate or prevent skin ageing.

18. A process for identifying a plant extract suitable for the preparation of a dermatological formulation, said process comprising the steps of:
 - (a) generating a plurality of potential extracts by solvent extraction of plant material;
 - (b) analysing the ability of each of said potential plant extracts to inhibit one or more extracellular protease selected from the group of: matrix metalloprotease-1 (MMP-1), matrix metalloprotease-2 (MMP-2), matrix metalloprotease-3 (MMP-3), matrix metalloprotease-9 (MMP-9) and human leukocyte elastase (HLE);
 - (c) selecting those potential extracts that are capable of inhibiting the activity of at least one of said extracellular proteases to provide a group of extracts;
 - (d) analysing each extract in said group of extracts for the ability to affect one or more cellular activities in skin cells selected from the group of: attenuating the breakdown of collagen, fibronectin, fibrillin and/or elastin; attenuating endothelial cell migration; increasing collagen production; attenuating UV-induced extracellular protease activity and attenuating tractional forces generated by fibroblasts; and
 - (e) selecting an extract that is capable of affecting one or more of said cellular activities to provide a plant extract suitable for the preparation of a dermatological formulation.
19. The process according to claim 18, wherein said plurality of potential extracts is generated from plant material from a single plant source.
20. The process according to claim 18, wherein said plurality of potential extracts is generated by selecting a group of plants; harvesting plant material from each plant in said selected group of plants; and subjecting said plant material from each plant to a solvent extraction process to provide said plurality of potential extracts.

21. The process according to any one of claims 18, 19 or 20, wherein said solvent extraction process employs an alcohol, water, an aqueous buffer, or a combination thereof as solvent.
22. The process according to any one of claims 18, 19, 20 or 21, wherein the group of extracts selected in step (c) are capable of inhibiting the activity of at least one of said extracellular proteases by at least 20%.
23. The process according to any one of claims 18, 19, 20, 21 or 22, further comprising the steps of subjecting each plant extract in said group of extracts to at least one cytotoxicity, bioavailability or stability test and selecting those extracts that demonstrate physiologically acceptable cytotoxicity, bioavailability and/or stability.
24. The process according to any one of claims 18, 19, 20, 21, 22 or 23, wherein said plant material is generated from a plant or group of plants that have been subjected to one or more stress.